

Date: Wed, 21 Apr 93 13:03:05 PDT  
From: Ham-Policy Mailing List and Newsgroup <ham-policy@ucsd.edu>  
Errors-To: Ham-Policy-Errors@UCSD.Edu  
Reply-To: Ham-Policy@UCSD.Edu  
Precedence: Bulk  
Subject: Ham-Policy Digest V93 #110  
To: Ham-Policy

Ham-Policy Digest                      Wed, 21 Apr 93                      Volume 93 : Issue 110

Today's Topics:

10meters (Give it to CB)  
CW = effective utilization? (3 msgs)  
I like it, so everybody should like it  
Just waiting the OFs out  
OO != Slow

Send Replies or notes for publication to: <Ham-Policy@UCSD.Edu>  
Send subscription requests to: <Ham-Policy-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Policy Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-policy".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.

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Date: Wed, 21 Apr 93 15:48:55 GMT  
From: usc!howland.reston.ans.net!bogus.sura.net!news-feed-1.peachnet.edu!umn.edu!  
csus.edu!netcom.com!netcomsv!orchard.la.locus.com!prodnet.la.locus.com!  
lando.la.locus.com!dana@network.UCSD.EDU  
Subject: 10meters (Give it to CB)  
To: ham-policy@ucsd.edu

In article <1993Apr21.010809.3529@physics.unr.edu> mswmod@nimbus.sage.unr.edu  
(stark) writes:

>  
>I wasn't including "kits" as building. Someone else has done all  
>the hard work for you. Kits can be fun etc, but that's not quite  
>the same. Tho they are a lot better than nothing.  
>

Ahhh.... always change standards to support your argument. Maybe building  
equipment from kits is easy... yeah. Heck, using "store bought" semiconductors  
is too easy, too; someone else has done all the hard work. From now on,

only people who fabricate their own semiconductors and vacuum tubes from scratch qualify as home-brewers.

Oh, but starting with pure silicon is too easy; home-brewers need to start from sand and build their own semiconductors.

Yeah, hams today are a spineless bunch of illiterate wimps.

>Let me ask you this Zack, how many hams do you know who have never  
>owned a soldering iron? How many that don't even own a little multi  
>meter?

Why does this matter?

>When I became active again a few years ago things had changed a lot.  
>Most newer hams just wanted to operate. No disire to figure out what  
>makes things tick. Maybe it's just a sign of the times.....

OH MY GAWD! Hams just want to \*operate\* ? Nooooooo!! Heaven forbid!  
You mean hams would rather \*communicate\* than futz with the equipment  
and build cheesy J-pole antennas? Oh-no-no-no-no.... what has happened?  
Total erosion of society and morals! Arrrgghhh!

I love to experiment, and build equipment. But, I also love to  
operate. I like to freely exchange ideas with people. Please don't  
run down hams who prefer to communicate.

--

\* Dana H. Myers KK6JQ | Views expressed here are \*  
\* (310) 337-5136 | mine and do not necessarily \*  
\* dana@locus.com DoD #466 | reflect those of my employer  
\*  
\* This Extra supports the abolition of the 13 and 20 WPM tests \*

-----  
Date: Wed, 21 Apr 93 15:39:16 GMT  
From: destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.uclb.ualberta.ca!alberta!adec23!  
mark@uunet.uu.net  
Subject: CW = effective utilization?  
To: ham-policy@ucsd.edu

a-kevinp@microsoft.COM (Kevin Purcell, Rho) writes:

>Paul you should stop these bogus "CW is the most effecient mode in  
>100Hz".

Kevin, during a busy day, I can find a CW QSO every 50Hz, some of them going

at >40WPM passing traffic far more reliably than any RTTY or Phone mode.  
Your argument is moot. The human brain is still the best audio filter in  
existence (see below why).

However, the REAL problem is not this 'CW to get in' requirement, since it  
is such an easy mode to learn, if done properly, but the stupid FCC  
requirement that prevents new modes from being experimented on the air.

Packet Radio (Canadian Invention, Yahoo!), AMTOR, PACTOR et al were designed  
OUTSIDE the US, simply because there would be no easy way for these modes to  
be introduced or invented in the US. Fix the \*big\* problem first boys, CW  
will drop once the \*real\* experimentation can take place (after we take all  
the appliance operators out and shoot them :-)

>How about we do the amateur exams in Latin. That would keep all those  
>young CBer types off the bands ...

Itay Isay notay theay CBersay youay haveay toay worryay aboutay :-}

Ciao -- Mark

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Date: 21 Apr 1993 16:47:12 GMT  
From: usc!howland.reston.ans.net!noc.near.net!bigboote.WPI.EDU!rajeesh.WPI.EDU!  
mute@network.UCSD.EDU  
Subject: CW = effective utilization?  
To: ham-policy@ucsd.edu

In article <1993Apr21.151415.29565@ve6mgs.ampr.org> mark@ve6mgs.ampr.org (Mark G.  
Salyzyn) writes:

>dana@lando.la.locus.com (Dana H. Myers) writes:

>

>>Yeah. All the people that say "Quit whining and just learn the code"  
[whole lot of stuff deleted.]

>to try to move that date up using appropriate channels ...

Hey, get this out of alt.sex.bestiality.hamster.duct-tape!

Josh Brandt

--

You're stupid and you're nothing 'cause your eyes are shut	You
And I can see everything in colors now.	Shriek
- mute@wpi.wpi.edu	Joshua Brandt -

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Date: Wed, 21 Apr 93 17:32:00 GMT

From: usc!howland.reston.ans.net!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!  
umunhum!paulf@network.UCSD.EDU  
Subject: CW = effective utilization?  
To: ham-policy@ucsd.edu

In article <1993Apr21.014519.21883@nntpd2.cxo.dec.com> little@nuts2u.enet.dec.com  
(nuts2u::little) writes:  
>Proving commitment takes much more than simple observation.

Every licensee in the US has proven at least a passing knowledge of CW.  
They have made a commitment to learning the mode which requires the least  
amount of spectrum per QSO.

>So to change the licensing requirements, you're suggesting that it  
>is necessary to prove that spectral utilization of the HF bands won't  
>increase????

That is correct. Again, this true for every service, not just the Amateur  
Service. In fact, it's true for any telecommunications system; you design  
the system to a certain load with a certain grade of service in mind.

>If your argument for the CW requirement is a fear of overloading the SSB  
>bands but not the CW bands, then why is 13 or 20 WPM required to use most  
>of the CW allocations of the HF bands?

Because anything less than that is not conversational, and as such, doesn't  
offer a realistic alternative to SSB. Given a conversational wideband mode,  
and plodding along at 5 wpm, the choice will be for a mode which requires  
24x the spectrum.

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--Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

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Date: 21 Apr 1993 13:16:30 GMT  
From: usc!cs.utexas.edu!tamsun.tamu.edu!cs.tamu.edu!kurt@network.UCSD.EDU  
Subject: I like it, so everybody should like it  
To: ham-policy@ucsd.edu

In article <1993Apr20.190557.118942@locus.com>, dana@lando.la.locus.com (Dana H.  
Myers) writes:  
|> Maybe we ought to ask John DeArmond what peculiar things he likes and put  
|> them in the ham licensing....

That would make them automatically eligible for Branch Davidian membership....  
8-}

--

Kurt Freiburger, wb5bbw kurt@cs.tamu.edu 409/847-8607 fax:409/847-8578  
Dept. of Computer Science, Texas A&M University DoD #264: BMW R80/7 pilot  
"We preserve our freedom using three boxes: ballot, jury, and cartridge."  
\*\*\* Not an official document of Texas A&M University \*\*\*

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Date: 21 Apr 93 08:33:21 EDT  
From: usc!wupost!udel!news.intercon.com!psinntp!arrl.org@network.UCSD.EDU  
Subject: Just waiting the OFs out  
To: ham-policy@ucsd.edu

In rec.radio.amateur.policy, gary@ke4zv.uucp (Gary Coffman) writes:

>>>...The IARU is a creature of the ARRL, ...  
>>  
>  
>Ask them who formulated the IARU structure, who pays the bills for  
>many member societies' participation in meetings, who does the  
>publishing and scheduling of IARU activities, etc.  
>

No need; I already know. So let's now let the other net members  
know as well:

It's incorrect to let loose with such an insinuation. ARRL is  
but one (a very important, but still only one) part of the IARU equation.  
ARRL is a participant, nothing more.

ARRL does pay for some of the participation expenses but not all, and  
not even the majority of them, by any stretch of the grey-matter  
memory banks or imagination. Ditto for the "publishing and  
scheduling" stuff. ARRL membership dues go toward a portion of  
that, but for you to indicate in a public forum like this that  
that somehow translates into the IARU being a subset of the ARRL,  
or even somehow financially beholden to them is, well, untrue.

			Deputy Manager, Field Services, ARRL.
		____	The ARRL Amateur Radio Emergency Service, the ARRL
	uck		National Traffic System, The Amateur Auxiliary to
	-----		the FCC's Field Operations Bureau, the ARRL
	KY1T		Field Organization and the ARRL Monitoring System.

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lhurder@arrl.org Prodigy - MGTS39A, BIX - ARRL,  
MCI Mail - RPALM, MCI Mail - "ARRL", America On Line - "ARRL HQ"  
Compuserve - 70007,3373 (ARRL HQ) -- Genie ARRL.HQ

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Date: Wed, 21 Apr 93 15:53:46 GMT  
From: destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!adec23!  
mark@uunet.uu.net  
Subject: OO != Slow  
To: ham-policy@ucsd.edu

little@nuts2u.enet.dec.com (nuts2u::little) writes:

>You're  
>telling me that if all amateurs decided to use AM that the FCC should  
>mandate CW? I thought these were *\*our\** bands to do with as the  
>majority determines. This still is a democracy, right?

YOU think that the airwaves are a democracy? In Canada I can choose to  
operate 9600 Baud Packet on HF, you have to sign an STA waiver which  
will restrict your every little move in the US. Can I bring up your  
Congress changing the laws of physics (Cell phone receiving restrictions)?

I am sorry for you folks down there in the US ... what a mess, the rest of  
the world has gotten rid of mode restrictions in 'law' and ye wallow  
around wondering if CW is more spectrally efficient than SSB. Fix the  
problem, rather than being such poor marksmen and pointing to the  
wrong solutions ...

>You extoll CW's virtues and I can give numerous concrete examples of  
>people learning it for non-licensing reasons. Yet you claim amateurs  
>won't learn it unless forced to learn it. Say what?

Actually, I figured I'd grin and bear the first year of CW only I had  
to endure. I am thankful they forced me to learn such an enjoyable mode.

This is simply gratitude, I still do not support incentive licensing, but  
that is a minor annoyance as compared to the more serious problems with  
your service ...

Ciao -- Mark

-----  
Date: 21 Apr 1993 12:18:17 +0300  
From: mcsun!news.funet.fi!butler.cc.tut.fi!lehtori.cc.tut.fi!not-for-  
mail@uunet.uu.net

To: ham-policy@ucsd.edu

References <1993Apr19.231621.12745@leland.Stanford.EDU>, <1r0has\$368@cc.tut.fi>, <1993Apr20.193323.8857@leland.Stanford.EDU>tut.fi  
Subject : Re: 00 != Slow

paulf@umunhum.stanford.edu (Paul Flaherty) writes:

> Spectral efficiency has to be taken in terms of bandwidth per user, as well  
> as in bits per hertz, and economics as well. Otherwise you're comparing  
> apples with oranges. True, you can get to within 50% of the Shannon bound  
> these days, using better modulation schemes, but unless it occupies less than  
> 100 Hz, and is as accessible to the average ham as the manual techniques,  
> it won't be used.

To give you some idea what a HF-packet system might look like,  
here are some details about PacTor:

- maximum bandwidth 600 Hz
- modulation speeds 100/200 baud
- packet period (data+ACK) 1.25 s
- packet data size (at 200 baud) 160 bits compressed,  
35 characters plain English text
- > throughput about 1700 CPM = 340 WPM

As the bandwidth is six times wider, we put six logical links on the same frequency. Maximum throughput 57 WPM/user and allowing for collisions (no CDMA) the effective throughput is much greater as the average CW throughput. An operator sending at 13 WPM would generate about two packets/min (2.5 s/min) and the remaining time (57.5 s) would be available to the other 5 operators and for retransmissions due to collisions. This is how a 600 Hz wide channel shared by six operators can be as spectrally efficient as six 100 Hz wide channels each occupied by only one operator.

Yes, I admit that PacTor specification level 1 doesn't allow for multiple links on a single channel, but by adding a 12-16 bit link-ID (e.g. a CRC of the calls involved) into each packet would enable multiple QSOs simultaneously degrading the throughput only a few percent.

While looking the specifications, I could not find a reason why a PacTor TNC could not be implemented using a FSK modem chip and a micro-controller (no DSP required). Serial connection (RS-232) for a terminal or a PC would be required.

If there are extra I/O pins on the micro-controller, one could drive a loudspeaker and one could be connected to a key for those who have

keyboard phobia :-) . In fact the hardware cost for such a system is not much more than for a Logikey K-1.

In any ARQ based protocol it is easy to implement automatic power control (see March QST) and thus allow more re-use of frequencies.

As more advanced protocols require expensive DSPs, the high cost is partly due to the huge package (100+ pins) as the codec and the memories are not on the chip. When a 56000 class DSP, all memories and the codec can be packed into a 16-24 pin DIL package, the cost will drop a lot. In a few years the production cost for an advanced DSP-TNC is about the same as the standard TNC is today. New protocols should not be rejected simply because the hardware costs a lot today.

Paul OH3LWR

-----  
Date: Wed, 21 Apr 93 15:14:15 GMT  
From: destroyer!cs.ubc.ca!unixg.ubc.ca!kakwa.ucs.ualberta.ca!alberta!adec23!mark@uunet.uu.net  
To: ham-policy@ucsd.edu

References <C5o1r9.5x5@news.Hawaii.Edu>, <1993Apr19.154848.19613@ve6mgs.ampr.org>, <1993Apr19.220357.165205@locus.com>%  
Subject : Re: CW = effective utilization?

dana@lando.la.locus.com (Dana H. Myers) writes:

>Yeah. All the people that say "Quit whining and just learn the code"  
>and those who agree with it, I challenge you to just start standing on  
>your head.

Thank you! Thank you! Thank you! This has saved my marriage! My wife was getting bored with all the current positions! And now with the increased strength in my neck muscles I can now <...>

And now, Dana, it still doesn't change the fact that \*most\* of the people that are against incentive licensing (or a reasonable facimile) in my area are no-coders. This only serves to hurt the cause. It is far better to try to change the system from within ...

Frankly, the best way of solving your problem is not to bash heads (or tell people to use them as feet), but to write letters to the FCC, Congress and the like! I have asked DOC (Communications Canada) in a public forum:

    'Now that the CW requirement is dropped from the marine service, the last service to have a CW requirement is the Amateur Radio Service.



When do you feel that the ITU, or next WARC conference, will ratify a change to the CW requirement for us? And how long after will you drop the CW testing requirements?'

Sure, half the audience almost got their bottles out to bash my head in, but I got a straight answer (2005 + immediatly after). The result of my statement out of the blue (DOC was there to train us in dealing with interference) has created a great deal of hubub in the local no-code community to try to move that date up using appropriate channels ...

Dana, you will live longer if you develop a sense of humor, and direct your energies to the cause more directly!

Ciao, 73 de VE6MGS/Mark -sk-

-----  
Date: Wed, 21 Apr 93 17:11:27 GMT  
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!umunhum!paulf@network.UCSD.EDU  
To: ham-policy@ucsd.edu

References <9304200226.AB04700@netmail.microsoft.com>,  
<1993Apr20.161800.3415@leland.Stanford.EDU>, <C5syJE.C1x@squam.banyan.com>m  
Subject : Re: CW = effective utilization?

In article <C5syJE.C1x@squam.banyan.com> dts@banyan.com (Daniel Senie) writes:  
>OK, so crank up your keyer to 20 or 30 WPM and turn on the spectrum analyzer  
>and tell me how wide your transmitted signal is. NOT how wide a filter can be  
> used to copy, how wide your transmitted signal IS.

The Necessary Bandwidth, not the Occupied Bandwidth, determines spectrum reuse within a service and mode. In fact, given coherent detection, the Occupied Bandwidth is completely irrelevant.

--  
-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

-----  
Date: Wed, 21 Apr 93 17:54:22 GMT  
From: usc!howland.reston.ans.net!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!umunhum!paulf@network.UCSD.EDU  
To: ham-policy@ucsd.edu

References <1993Apr20.032014.15545@muug.mb.ca>,  
<1993Apr20.164432.4100@leland.Stanford.EDU>, <1993Apr20.224047.630@ke4zv.uucp>0  
Subject : Re: 00 != Slow

In article <1993Apr20.224047.630@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman) writes:

>Well the primary reason for overcrowding of the voice portions of the  
>HF bands is that nearly half of the spectrum is restricted from use by  
>voice operators at all, and another portion is restricted to only those  
>who exhibit irrelevant to voice operations high speed CW skills.

Well, let's check on Gary's math here:

Band	non-SSB	SSB
80/75	250	250
40	150	150
30	50	0
20	150	200
17	42	58
15	200	250
12	40	60
10	300	2400
	---	----
	1182	3368
	-----	
	Total:	4550 kHz

Net: 26% 74%

-----  
Date: (null)

From: (null)

1. Your arithmetic was off by about 3db.
2. Opening up the non-SSB portions to SSB would only increase capacity by less than 35%.

--  
-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

-----  
Date: Wed, 21 Apr 1993 13:21:11 EST  
From: anomaly.sbs.com!n1mpq!news@uunet.uu.net  
To: ham-policy@ucsd.edu

References <1993Apr20.032014.15545@muug.mb.ca>,  
<1993Apr20.054454.18770@nntpd2.cxo.dec.com>,  
<1993Apr20.192221.8303@leland.Stanford.EDU>

Subject : Re: 00 != Slow

paulf@umunhum.stanford.edu (Paul Flaherty) writes:

> True, but 1) The majority of growth is occurring in the code capable  
> population, by a 2:1 margin over the "code free" licensees, and 2) technical  
> merit is never determined by popular vote.

Hmmm... have you seen the W5YI report? It seems to indicate that the  
codeless license has overtaken the novice entry route.

> No, I have never been a "bash the no-coders, look what they've done to my  
> band" ham; in fact, you will recall that I advocated eliminating the  
> code requirement for the tech license, both for introductory reasons, and  
> because the UHF (and in most places, VHF) spectrum is underutilized.

But the problem is we're sacrificing quantity for quality.

Tony

```
-----  
-- Anthony S. Pelliccio, kd1nr/ae      // Yes, you read it right, the //  
-- system @ garlic.sbs.com            // man who went from No-Code //  
-----// (Thhhppptt!) to Extra in    //  
-- Flame Retardent Sysadmin          // exactly one year!         //  
-----  
-- This is a calm .sig! --  
-----
```

-----  
Date: Wed, 21 Apr 93 18:39:10 GMT  
From: usc!howland.reston.ans.net!usenet.ins.cwru.edu!agate!headwall.Stanford.EDU!  
nnntp.Stanford.EDU!calvin!paulf@network.UCSD.EDU  
To: ham-policy@ucsd.edu

References <1993Apr20.054454.18770@nnnnpd2.cxo.dec.com>,  
<1993Apr20.192221.8303@leland.Stanford.EDU>,  
<930421.132111.7A2.rusnews.w165w@garlic.sbs.com>p  
Subject : Re: 00 != Slow

In article <930421.132111.7A2.rusnews.w165w@garlic.sbs.com> system@garlic.sbs.com  
(Anthony S. Pelliccio) writes:  
>Hmmm... have you seen the W5YI report? It seems to indicate that the  
>codeless license has overtaken the novice entry route.

Yes, but according to the FCC, 2/3 of the codeless licensees have upgraded  
to Tech Plus.

--

-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

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Date: Wed, 21 Apr 93 18:27:53 GMT  
From: usc!howland.reston.ans.net!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!  
umunhum!paulf@network.UCSD.EDU  
To: ham-policy@ucsd.edu

References <1r0has\$368@cc.tut.fi>, <1993Apr20.193323.8857@leland.Stanford.EDU>,  
<1r33gp\$3j6@cc.tut.fi>  
Subject : Re: 00 != Slow

In article <1r33gp\$3j6@cc.tut.fi> k23690@lehtori.cc.tut.fi (Kein{nen Paul) writes:  
>As the bandwidth is six times wider, we put six logical links on the  
>same frequency. Maximum throuhput 57 WPM/user and allowing for collisions  
>(no CDMA) the effective thoughput is much greater as the average CW  
>throughput.

Um, no. According to Kleinrock et al, the load / throughput curve for  
pure contention systems is given by:

$$S = G e^{-2G}$$

The maximum capacity occurs with a load of  $G=0.5$ , where  $S = 0.18$ , or 18% of  
capacity. \*At Most\*. Assuming optimal loading, and a typical bit error  
rate of  $10^{-3}$ , the best you can expect out of such a system is 52.1 WPM,  
yielding 8.7 WPM per user. That's nowhere near comparable to what six  
CW ops can get into 600 Hz.

--

-=Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

-----

Date: Wed, 21 Apr 93 17:19:01 GMT  
From: usc!howland.reston.ans.net!agate!headwall.Stanford.EDU!nntp.Stanford.EDU!  
umunhum!paulf@network.UCSD.EDU  
To: ham-policy@ucsd.edu

References <9304200226.AB04700@netmail.microsoft.com>,  
<1993Apr20.161800.3415@leland.Stanford.EDU>, <1993Apr20.223358.389@ke4zv.uucp>p  
Subject : Re: CW = effective utilization?

In article <1993Apr20.223358.389@ke4zv.uucp> gary@ke4zv.UUCP (Gary Coffman)  
writes:

>I suspect that there are already more TNCs in use than keyers despite  
>their higher cost.

First, how many of those TNCs are HF capable. Not the majority. Second,  
yes, there are plenty of TNCs out there, but you also have to take into  
account that of those who own TNCs, most own more than one. So just counting  
TNCs sold doesn't translate to real information.

>And the LOWFER system already far exceeds conventional CW performance  
>in bandwidth and weak signal performance. It can be built for under  
>\$100.

Yes, but unless you can show that the vast majority will use such systems  
exclusively, opening up the bands as proposed would overload the spectrum.

--

--Paul Flaherty, N9FZX | "Just name a hero, and I'll prove he's a bum."  
->paulf@Stanford.EDU | -- Col. Gregory "Pappy" Boyington, USMC (ret)

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Date: Wed, 21 Apr 93 19:33:28 GMT  
From: mnemosyne.cs.du.edu!nyx!jmaynard@uunet.uu.net  
To: ham-policy@ucsd.edu

References <Ny6a3B1w165w@stock.apana.org.au>, <1993Apr20.213614.29801@ke4zv.uucp>,  
<1993Apr21.000247.26363@samba.oit.unc.edu>p  
Subject : Re: My thoughts...

In article <1993Apr21.000247.26363@samba.oit.unc.edu> Kirk.Smith@launchpad.unc.edu  
(Kirk Smith) writes:

>How is using an  
>outdated mode of communications (ie: CW) to do contesting, ragchews,  
>and signal report exchanges to get that coveted QSL card so much more  
>"experimental" or justified than a 2m rag-chew?

Maybe if you'd quit bashing CW, the CW types would quit bashing you.

--

Jay Maynard, EMT-P, K5ZC, PP-ASEL | Never ascribe to malice that which can  
jmaynard@oac.hsc.uth.tmc.edu | adequately be explained by stupidity.  
"If OS/2 is dead, then there are an awful lot of vocal ghosts calling us on  
the phone." -- Katy Ansardi of Indelible Blue (an OS/2 exclusively store)

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End of Ham-Policy Digest V93 #110

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